

through 62, and 74 through 79 — "Group II" of the claims as defined at page 2 of the Action.

(Applicant previously canceled claims 8, 9 and 13, claims 17 through 41, 63 through 65, and 70 through 72.)

Starting on the next page is a full presentation ("clean") of all the claims now in this case, namely:

- all claims amended hereby (claims 3 through 7, and claims 66 and 67);
- new claims hereby added (claims 80 through 96); and
- the unamended claims (claims 1, 2, 11, 12, 68, 69 and 73).

Regarding this claim-numbering format please see the "REMARKS" section, page 16.

Marked-up copies of the claims as amended in this document are provided below in the Appendix, following the signature page.

PLEASE NOTE: For the Examiner's convenience, and consistent with 37 CFR § 121(c), the new claims are inserted into the claim sequence at the points where proposed — namely, new 80 through 86 following claim 2; new 87 and 88 following claim 7; and 89 through 96 following 73.

Thus the claims are in desired sequence though not in numerical order.

**[Claims 1 and 2 below are original unamended claims.]**

1 1. A laser projector comprising:  
2 laser apparatus for projecting a picture beam that  
3 includes visible laser light of wavelength about six hundred  
4 thirty-five (635) nanometers or longer; and  
5 a reflective liquid-crystal light valve for modulating  
6 the beam with a desired image.

1 2. The projector of claim 1, wherein:  
2 light that appears red in the beam comprises substan-  
3 tially only said laser light of wavelength about 635 nanome-  
4 ters or longer.

1 80. (new) The projector of claim 2, further comprising:  
2 means for also incorporating blue and green laser light  
3 into the picture beam; and  
4 separate, additional reflective liquid-crystal light  
5 valves for modulating the blue and green light respectively.

1 81. (new) The projector of claim 80, wherein:  
2 said light valve also receives blue and green laser  
3 light for modulation, within the same light valve.

1 82. (new) The projector of claim 2, further comprising:  
2 means for scanning the beam across a face of the light  
3 valve during projection of each image, rather than flooding  
4 the entire face substantially simultaneously.

1 83. (new) The projector of claim 82, further comprising:  
2 means for also incorporating blue and green laser light  
3 into the picture beam; and  
4 separate, additional reflective liquid-crystal light  
5 valves for modulating the blue and green light respectively.

1 84. (new) The projector of claim 2, wherein:  
2 said light valve also receives blue and green laser  
3 light for modulation, within the same light valve.

1 85. (new) The projector of claim 82, wherein:  
2 the laser apparatus comprises no solid-state lasers,  
3 but rather exclusively lasers of gas type.

1 86. (new) The projector of claim 2, wherein:  
2 the laser apparatus comprises no solid-state lasers,  
3 but rather exclusively lasers of gas type.

1 3. (amended) The projector of claim 86, wherein:  
2 said apparatus projects a beam in which light that ap-  
3 pears red is of wavelength between about 635 and 650 nano-  
4 meters.

1 4. (amended) The projector of claim 1, wherein:  
2 said apparatus projects a beam in which light that ap-  
3 pears red is of wavelength substantially 647 nanometers.

1 5. (amended) The projector of claim 4, wherein:  
2 the image is a moving picture.

1 6. (amended) The projector of claim 1, further  
2 comprising:  
3 further laser apparatus for projecting one or more  
4 beams that include green and blue laser light; and  
5 wherein the laser light of wavelength about 635 nanome-  
6 ters or longer mixes with the green and blue laser light to  
7 provide substantially pure neutral colors including pure  
8 white and pure black.

1 7. (amended) The projector of claim 6, wherein:  
2 the further laser apparatus projects substantially cyan  
3 native laser light with the blue or green light, or both.

1 87. (new) The projector of claim 6, further comprising:  
2 means for also incorporating the blue and green laser  
3 light into said picture beam; and  
4 separate, additional reflective liquid-crystal light  
5 valves for modulating the blue and green light respectively.

1 88. (new) The projector of claim 6, wherein:  
2 said light valve also receives the blue and green laser  
3 light for modulation, within the same light valve.

**[Claims 8 and 9 have been canceled.**

**Claims 10 through 12 below are original unamended claims.]**

1 10. The projector of claim 6, further comprising:  
2 means for receiving high-bandwidth red, green and blue  
3 computer-monitor signals from a computer;  
4 wherein the projector serves as a high-color-fidelity  
5 computer monitor.

1 11. The projector of claim 6, wherein:  
2 the liquid-crystal light valve is not controlled by  
3 light derived from traditional broadcast video signals.

1 12. The projector of claim 11, wherein the liquid-crystal  
2 light valve is controlled by light or control signals ap-  
3 plied to the valve by writing onto a control stage of the  
4 valve:

5 a vector, bitmap or other computer file scanned  
6 from an image or generated in a computer, or

7  
8 amplitude-modulated laser-diode illumination swept  
9 two-dimensionally across the control stage,  
10 or

11  
12 images from a small transmissive liquid-crystal  
13 display modulator, in turn written by signals  
14 not derived from traditional broadcast video  
15 signals, or

16  
17 other entire frames without interlace, or

18  
19 motion-picture film color separations, or

20  
21 a still image from a slide or overhead-projection  
22 transparency, or a color separation made  
23 therefrom, or

24  
25 a live image optically coupled, without electronic  
26 intermediary, to the control stage.

**[Claim 13 has been canceled.**

**Claims 14 through 16 below are original unamended claims.]**

1 14. The projector of claim 6, wherein:  
2 the first-mentioned laser apparatus and the further  
3 laser apparatus, considered together, comprise one or more  
4 lasers; and  
5 every laser in the first-mentioned laser apparatus and  
6 the further laser apparatus is exclusively a solid-state  
7 laser.

1 15. The projector of claim 6, wherein:  
2 the first-mentioned laser apparatus and the further  
3 laser apparatus, considered together, comprise one or more  
4 lasers; and  
5 every laser in the first-mentioned laser apparatus and  
6 the further laser apparatus is exclusively a gas laser.

1 16. The projector of claim 1, further comprising:  
2 further laser apparatus for projecting one or more pic-  
3 ture beams that include green and blue laser light; wherein:  
4 the proportions of light power of the about 635-nan-  
5 ometer or longer-wavelength laser light, the green laser  
6 light and the blue laser light are roughly eight to six to  
7 five (8:6:5) ..

**[Claims 17 through 65 have been canceled.]**

1 66. (amended) A laser projection system for forming an  
2 image on an irregular projection medium having portions at  
3 distinctly differing distances from the projector; said  
4 system comprising:

5 laser apparatus for projecting a picture beam that  
6 includes laser light;

7 a liquid-crystal light valve for impressing an image  
8 onto the beam; and

9 means for projecting the beam from the light valve,

10 ~~with said impressed image onto such irregular projection~~

with said impressed image onto such irregular projection  
medium as a show for an audience.



1    67.    (amended)    The system of claim 66, wherein:  
2            the irregular projection medium comprises one or more  
3    projection media selected from the group consisting of:  
4  
5            an interior of a dome, or other building having  
6                    internal surfaces that are not generally  
7                    normal to a projection direction,  
8            an exterior of a dome, sculpture, monument, or  
9                    other structure having external surfaces that  
10                   are not generally normal to a projection  
11                   direction,  
12           a waterfall,  
13           a water fountain,  
14           fog or a cloud,  
15           ice,  
16           a scrim in front of a curtain or screen,  
17           a plurality of scrims in optical series,  
18           one or more trees,  
19           grass, vines or other foliage,  
20           a hillside or other landscape, or other receding  
21                   surface, and  
22           an array of people or other animals or other discrete  
23                   objects, or combinations thereof, at  
24                   diverse distances from the projecting means;  
25           and  
26  
27           the projecting means display a protracted show on the  
28    one or more projection media, for the audience.

**[Claims 68 and 69 below are original unamended claims.]**

1 68. The system of claim 67, further comprising:  
2 such irregular projection medium.

1 69. The system of claim 66, further comprising:  
2 such irregular projection medium.

**[Claims 70 through 72 have been canceled.**

**Claim 73 is an original unamended claim.]**

1 73. The system of claim 66, wherein:  
2 the laser apparatus comprises one or more lasers; and  
3 every laser in the laser apparatus is exclusively a  
4 solid-state laser.

**[Claims 74 through 79 have been canceled.**

**Claims 80 through 88 appear *above* in sequence.]**

1 89. (new) The projector of claim 66:  
2 wherein the laser apparatus projects red laser light in  
3 the picture beam; and  
4 the light valve impresses red components of an image  
5 onto the red laser light; and  
6 further comprising:  
7  
8 means for also incorporating blue and green laser  
9 light into the picture beam, and  
10  
11 separate, additional liquid-crystal light valves for  
12 respectively impressing blue and green components  
13 of the image onto the blue and green light.

1 90. (new) The projector of claim 66, wherein:  
2 said light valve receives laser light components of  
3 three respective colors and impresses corresponding color  
4 components of the image onto the three respective light com-  
5 ponents, respectively, all within the same light valve.

1 91. (new) A laser projection system for forming an image  
2 on an irregular projection medium having portions at dis-  
3 tinctly differing distances from the projector; said system  
4 comprising:  
5 laser apparatus for projecting a picture beam that  
6 includes laser light;  
7 a liquid-crystal light valve for impressing an image  
8 onto the beam; and  
9 means for projecting the beam from the light valve,  
10 with said impressed image, onto such irregular projection  
11 medium to form a substantially sharp image on such medium at  
12 such distinctly differing distances.

1 92. (new) The system of claim 91, wherein:  
2 the irregular projection medium comprises one or more  
3 projection media selected from the group consisting of:  
4  
5 an interior of a dome, or other building having  
6 internal surfaces that are not generally  
7 normal to a projection direction,  
8 an exterior of a dome, sculpture, monument, or  
9 other structure having external surfaces that  
10 are not generally normal to a projection  
11 direction,  
12 a waterfall,  
13 a water fountain,  
14 fog or a cloud,  
15 ice,  
16 a scrim in front of a curtain or screen,  
17 a plurality of scrims in optical series,  
18 one or more trees,  
19 grass, vines or other foliage,  
20 a hillside or other landscape, or other receding  
21 surface, and  
22 an array of people or other animals or other dis-  
23 crete objects, or combinations thereof, at  
24 diverse distances from the projecting means;  
25 and  
26  
27 the projection means form the substantially sharp image  
28 on substantially each element of the selected one or more  
29 media.

1 93. (new) A laser projector comprising:  
2 laser apparatus for projecting a picture beam that  
3 includes visible laser light of wavelength longer than 640  
4 nanometers; and  
5 a reflective liquid-crystal light valve for modulating  
6 the beam with a desired image.

1 94. (new) The projector of claim 93, wherein:  
2 said apparatus projects a beam of wavelength substan-  
3 tially 647 nanometers.

1 95. (new) The projector of claim 93:  
2 wherein the light valve impresses red components of an  
3 image onto the laser light of wavelength longer than 640  
4 nanometers; and  
5 further comprising:  
6  
7 means for also incorporating blue and green laser  
8 light into the picture beam, and  
9  
10 separate, additional liquid-crystal light valves for  
11 respectively impressing blue and green components  
12 of the image onto the blue and green light.